

TABLE 2.—Principal droughts at New York, N. Y., during the years 1871–1914—Continued.

Year.	Period.			Accumulated precipitation, beginning with first day of drought and continuing till drought is broken—Continued.																					
	Began.	Ended.	Days.	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
1872....	Feb. 15	Mar. 9	24	0	0	0	1.58																		
1874....	Aug. 26	Sept. 15	21	0.96																					
1874....	Oct. 11	Nov. 19	40	.01	.01	.01	.01	.01	.01	.01	.01	.06	.06	.06	.06	.06	.06	.06	.06	.10	.36	.36	.59	.59	.62
1877....	Dec. 7	Jan. 31	28	.02	.02	.14	.14	.14	.14	.14	.75	.12	.12	.12	.12	.12	.13	.21	.27	.32	.36	.36	.36	.36	.36
1879....	Sept. 15	Oct. 27	43	.06	.06	.06	.06	.06	.11	.11	.12	.12	.12	.12	.12	.13	.21	.27	.32	.36	.36	.36	.36	.36	.36
1881....	Aug. 8	Sept. 9	33	.09	.09	.09	.09	.11	.11	.11	.11	.11	.11	.11	.11	.45	.47	1.27	.31	.31	.31	.31	.31	.31	
1884....	Sept. 1	Oct. 21	51	T.	2T.	3T.	3T.	3T.	3T.	3T.															
1886....	Aug. 8	Sept. 8	32	.07	.07	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26	.50	.50	.50	1.64						
1886....	Sept. 24	Oct. 26	33	.02	.02	.02	.02	.02	.02	.02	.49	.99													
1887....	Apr. 30	May 25	26	.13	.13	.13	.13	.13	.48	.49	.99														
1901....	Oct. 15	Nov. 23	40	.04	.04	.04	.04	.04	.04	.13	.24	.24	.24	.24	.24	.24	.24	.24	.24	.24	.24	.26	1.22		
1903....	Apr. 17	June 7	52	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.24	.32	.32	.32	.32	.32	.32	.33	.33	
1905....	Oct. 26	Nov. 27	33	.17	.17	.17	.17	.17	.17	.17	.17	.17	.17	.17	.17	.81	1.67								
1908....	Sept. 7	Oct. 25	49	.45	.70	.70	.70	.74	.74	.74	.74	.74	.74	.74	.74	.93	.94	.94	.94	.94	.94	.94	.94	.94	
1909....	Oct. 28	Nov. 22	26	.11	.11	.11	.11	.42	1.05	1.46															
1910....	Mar. 8	Apr. 16	40	.25	.25	.25	.25	.25	.25	.45	.46	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	1.23	1.70	
1910....	June 19	Aug. 8	51	.06	.06	.06	.06	.06	.06	.09	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.29	
1910....	Sept. 10	Oct. 19	40	4T.	4T.	4T.	4T.	4T.	4T.	.31	.31	.31	.31	.31	.31	.31	.31	.34	.34	.34	.34	.34	3.38		
1914....	Aug. 30	Oct. 15	47	2T.	2T.	2T.	2T.	.09	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	
Minimum				0	0	0	2T.	3T.	3T.	3T.	.01	.02	.02	.02	.06	.06	.06	.06	.06	.10	.18	.18	.18	.20	

Year.	Period.			Accumulated precipitation, beginning with first day of drought and continuing till drought is broken—Continued.																					
	Began.	Ended.	Days.	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
1872....	Feb. 15	Mar. 9	24																						
1874....	Aug. 26	Sept. 15	21																						
1874....	Oct. 11	Nov. 19	40	1.76																					
1877....	Dec. 7	Jan. 31	28																						
1879....	Sept. 15	Oct. 27	43	.64	0.64	0.64	0.64	0.64	0.68	0.76	0.76	0.77	1.13	1.13	1.13	1.13	1.13	1.27	1.30	1.30	1.39	1.40	1.40	1.40	2.01
1881....	Aug. 8	Sept. 9	33																						
1884....	Sept. 1	Oct. 21	51	.43	.43	.43	.43	.43	.43	.43	.43	1.23													
1886....	Aug. 8	Sept. 8	32																						
1886....	Sept. 24	Oct. 26	33																						
1887....	Apr. 30	May 25	26																						
1901....	Oct. 15	Nov. 23	40																						
1903....	Apr. 17	June 7	52	.33	.33	.33	.33	.33	.33	.33	.33	.49	.62	.77	.83	.83	2.76								
1905....	Oct. 26	Nov. 27	33	.94	.94	.94	.94	.94	.98	1.80															
1908....	Sept. 7	Oct. 25	49																						
1909....	Oct. 28	Nov. 22	26																						
1910....	Mar. 8	Apr. 16	40																						
1910....	June 19	Aug. 8	51	.29	.29	.47	.52	.52	.52	.52	.59	1.32	1.84												
1910....	Sept. 10	Oct. 19	40	.20	.20	.20	.26	1.96																	
1914....	Aug. 30	Oct. 15	47	.20	.20	.20	.26	1.96																	
Minimum				.20	.20	.20	.26	.33	.33	.33	.33	.49	.62	.77	.83	.83	1.13	1.27	1.30	1.30	1.39	1.40	1.40	1.40	2.01

1878.

NOTES ON ICE AND MERCURY.

Three recent memoirs have been published in the Transactions of the Royal Society of Canada on subjects of importance in meteorology. From these we make the following extracts:

1. *The crushing strength of ice* (by H. T. Barnes).¹—The crushing strength of ice varies according to its temperature, ranging between 358 and 1,128 pounds per square inch. The average in all directions relative to the freezing surface of the water is 363 pounds to the square inch.

2. *The expansive force of ice* (by H. T. Barnes, J. W. Hayward, and Norman McLeod).²—“As a result of our study of ice expansion, which must be regarded as only preliminary, we find that (a) The crushing strength of ice is most probably 400 pounds per square inch, or 28 kgms. per square centimeter; (b) an ice block will yield under pressure at approximately 200 pounds per square inch, which is probably due to the slipping of the crystals; (c) an ice sheet will form cracks on the upper and under surface due to unequal strain; (d) that a permanent expansion may result if the cracks become filled and frozen; (e) according to the most trustworthy results of other observers, the ice frozen to concrete develops its full crushing strength, and the tensile strength of ice is under 200 pounds per square inch.”

¹ Transactions, Royal Society of Canada, Ottawa, 1914 (3) 8: 19–22.² Transactions, Royal Society of Canada, Ottawa, 1914 (3) 8: 29–49.

3. *Coefficient of expansion of mercury at low temperatures* (by C. B. James).³—“Taking the mean value, we find:

Temperature range.	Coefficient uncorrected.	Coefficient corrected.
–20 to 0° C.	0.00017962	0.00018059
–30 to 0° C.	.000179389	.00018030
–37 to 0° C.	.000179005	.00017988

Temperature range.	Callendar and Moss.	Callendar and Harlow.	James.
0 to 100° C.	0.000182054	0.00018244	0.00018241
–20 to 0° C.	¹ .000180317		.00018059
–30 to 0° C.	¹ .00018025		.00018030
–37 to 0° C.	¹ .0001801		.000179881

¹ Extrapolated from formula.

“It will be seen that we are in good agreement with the determination of the quartz dilatometer of Callendar and Harlow, but disagree with the determination of Callendar and Moss. The last three results of Callendar and Moss are extrapolated values from Callendar and Moss formula which was deduced from observations extending to –10° C. only.

“Our results do not show any very large change in the coefficient although it falls off more rapidly than the extrapolation formula of Callendar.”

³ Transactions, Royal Society of Canada, Ottawa, 1914 (3) 8: 51–58.